2004
Annual Drinking Water Report For Wisconsin's Public Water Supply Systems

Public Water Supply Section
Bureau of Drinking Water and Groundwater

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http://dnr.wi.gov/org/water/dwg/

INTRODUCTION

The 2004 Annual Compliance Report is a summary of Wisconsin's Public Water System (PWS) compliance with the Safe Drinking Water Act (SDWA) during calendar year 2004. Wisconsin has approximately 11,400 public water systems that collect tens of thousands of samples each year. These systems are divided into four types (see definitions in Appendix B). The types and numbers of systems are as follows:

Municipal community systems	- 614
Other-than-municipal	- 472
Nontransient noncommunity	- 900
Transient noncommunity	- 9414

TOTAL	**11,400**

VIOLATION TYPES

There are three types of violations under the SDWA:

Monitoring and Reporting Violation (M/R)
A system incurs an M/R violation if they fail to collect a sample, or fail to report sample results by the deadline.

Maximum Contaminant Level Violation (MCL)
A system incurs an MCL violation if sample results confirm that a maximum permissible level of a contaminant is exceeded.

Treatment Technique Violation (TT)
A system incurs a treatment technique violation if they fail to implement appropriate technology to reduce the level of a contaminant in drinking water.

HOW TO USE THIS REPORT

Violations are categorized by contaminant group. Each group has a list of regulated compounds for which systems monitor and report sample results. The following pages list the numbers of violations for each sample group, as well as a summary of all violations for 2004. Violations are listed by type for each group. Please note: Although a PWS may be out of compliance with more than one contaminant or violation type, when calculating totals, each system is counted no more than once for each violation type. So, the sum of NUMBER OF PWS'S IN VIOLATION, over the various violation types or contaminants, may not add up to the total.

Also listed in each table are the numbers of violations that have returned to compliance (RTC). A system returns to compliance when it completes monitoring or operational requirements that caused a maximum contaminant level, monitoring/reporting, or treatment technique violation.

You can access more detailed information about your public water system through the Department of Natural Resources Drinking Water system at http://www.dnr.state.wi.us/org/water/dwg/, or through the Environmental Protection Agency web site at http://www.epa.gov/enviro/.

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VIOLATIONS FOR VOLATILE ORGANIC CONTAMINANTS (VOC)

Contaminant	MCL (mg/l)	MCLs # of Violations	MCLs # of RTC Violations	MCLs # of PWSs In Violation	Monitoring # of Violations	Monitoring # of RTC Violations	Monitoring # of PWSs In Violation
1,1-Dichloroethylene	0.007	0	0	0	45	12	37
1,1,1-Trichloroethane	0.2	0	0	0	45	12	37
1,1,2-Trichloroethane	0.005	0	0	0	45	12	37
1,2-Dichloroethane	0.005	3	0	1	45	12	37
1,2-Dichloropropane	0.005	0	0	0	45	12	37
1,2,4-Trichlorobenzene	0.07	0	0	0	45	12	37
Benzene	0.005	0	0	0	45	12	37
Carbon tetrachloride	0.005	0	0	0	45	12	37
cis-1,2-Dichloroethylene	0.07	0	0	0	45	12	37
Dichloromethane; methylene chloride	0.005	0	0	0	45	12	37
Ethylbenzene	0.7	0	0	0	45	12	37
Monochlorobenzene; Chlorobenzene	0.1	0	0	0	45	12	37
o-Dichlorobenzene	0.6	0	0	0	45	12	37
p-Dichlorobenzene	0.075	0	0	0	45	12	37
Styrene	0.1	0	0	0	45	12	37
Tetrachloroethylene	0.005	0	0	0	45	12	37
Toluene	1	0	0	0	45	12	37
trans-1,2-Dichloroethylene	0.1	0	0	0	45	12	37
Trichloroethylene	0.005	3	0	1	45	12	37
TTHM	0.10	0	0	0	4	2	4
Vinyl chloride	0.002	0	0	0	45	12	37
Xylenes, Total	10	0	0	0	45	12	37
VOC MCL and Monitoring Totals		**6**	**0**	**1**	**949**	**254**	**39**

Note: Although a PWS may be out of compliance with more than one contaminant or violation type, when calculating totals, it's counted no more than once within the population being totaled. So, the sum of NUMBER OF PWS'S IN VIOLATION, over the various violation types or contaminants, may not add up to the total.

VIOLATIONS FOR SYNTHETIC ORGANIC CONTAMINANTS (SOC)

Contaminant	MCL (mg/l)	MCLs # of Violations	MCLs # of RTC Violations	MCLs # of PWSs In Violation	Monitoring # of Violations	Monitoring # of RTC Violations	Monitoring # of PWSs In Violation
1,2-dibromo-3-chloropropane; DBCP	0.0002	0	0	0	1	0	1
2,3,7,8-TCDD (Dioxin)	3x10-8	0	0	0	1	0	1
2,4-D	0.07	0	0	0	3	0	3
2,4,5-TP; Silvex	0.05	0	0	0	3	0	3
Alachlor; Lasso	0.002	0	0	0	3	0	3
Atrazine	0.003	0	0	0	5	2	4
Benzo(a)pyrene	0.0002	0	0	0	4	0	4
Carbofuran	0.04	0	0	0	3	0	3
Chlordane	0.002	0	0	0	3	0	3
Dalapon	0.2	0	0	0	3	0	3
Di(2-ethylhexyl) adipate	0.4	0	0	0	1	0	1
Di(2-ethylhexyl) phthalate	0.006	3	0	2	1	0	1
Dinoseb	0.007	0	0	0	3	0	3
Diquat	0.02	0	0	0	3	0	3
Endothall	0.1	0	0	0	3	0	3
Endrin	0.002	0	0	0	3	0	3
Ethylene dibromide (EDB)	0.00005	0	0	0	1	0	1
gamma-BHC; Lindane	0.0002	0	0	0	3	0	3
Glyphosate	0.7	0	0	0	3	0	3
Heptachlor	0.0004	0	0	0	3	0	3
Heptachlor epoxide	0.0002	0	0	0	3	0	3
Hexachlorobenzene; HCB	0.001	0	0	0	3	0	3
Hexachlorocyclopentadiene	0.05	0	0	0	3	0	3
Methoxychlor	0.04	0	0	0	3	0	3
Oxamyl; Vydate	0.2	0	0	0	3	0	3
Pentachlorophenol	0.001	0	0	0	3	0	3
Picloram	0.5	0	0	0	3	0	3
Simazine	0.004	0	0	0	3	0	3
Toxaphene	0.003	0	0	0	3	0	3
SOC MCL and Monitoring Totals		**3**	**0**	**2**	**80**	**2**	**9**

Note: Although a PWS may be out of compliance with more than one contaminant or violation type, when calculating totals, it's counted no more than once within the population being totaled. So, the sum of NUMBER OF PWS'S IN VIOLATION, over the various violation types or contaminants, may not add up to the total.

VIOLATIONS FOR INORGANIC CONTAMINANTS (IOC)

Contaminant	MCL (mg/l)	MCLs # of Violations	MCLs # of RTC Violations	MCLs # of PWSs In Violation	Monitoring # of Violations	Monitoring # of RTC Violations	Monitoring # of PWSs In Violation
Antimony, Total	0.006	0	0	0	15	1	15
Arsenic	0.05	0	0	0	15	1	15
Asbestos	7M fibers<=10 mm	0	0	0	3	0	3
Barium	2	0	0	0	15	1	15
Beryllium, Total	0.004	0	0	0	15	1	15
Cadmium	0.005	0	0	0	15	1	15
Chromium	0.1	0	0	0	15	1	15
Mercury	0.002	0	0	0	15	1	15
Nitrate	10(as Nitrogen)	6	1	6	417	268	403
Nitrate-Nitrite	10(as Nitrogen)	11	4	11	14	0	14
Nitrite	1(as Nitrogen)	0	0	0	45	19	45
Selenium	0.05	0	0	0	15	1	15
Thallium, Total	0.002	0	0	0	15	1	15
IOC MCL and Monitoring Totals		**17**	**5**	**17**	**614**	**296**	**425**

VIOLATIONS FOR RADIONUCLIDE CONTAMINANTS (RAD)

Contaminant	MCL (pCi/l)	MCLs # of Violations	MCLs # of RTC Violations	MCLs # of PWSs In Violation	Monitoring # of Violations	Monitoring # of RTC Violations	Monitoring # of PWSs In Violation
Gross Alpha, Excl. Radon & U	15 pCi/l	0	0	0	5	1	4
Combined Radium (Ra-226 & Ra-)228	5 pCi/l	42	0	42	2	2	2
RAD MCL and Monitoring Totals		**42**	**0**	**42**	**7**	**3**	**5**

Note: Although a PWS may be out of compliance with more than one contaminant or violation type, when calculating totals, it's counted no more than once within the population being totaled. So, the sum of NUMBER OF PWS'S IN VIOLATION, over the various violation types or contaminants, may not add up to the total.

VIOLATIONS FOR TOTAL COLIFORM RULE (TCR)

Contaminant	MCL	# of Violations	# of RTC Violations	# of PWSs In Violation
MCL, Acute	(Present)	16	12	15
MCL, Monthly	(Present)	453	388	381
Monitoring Routine & Repeat Major		782	536	702

	MCLs			Monitoring		
	# of Violations	# of RTC Violations	# of PWSs In Violation	# of Violations	# of RTC Violations	# of PWSs In Violation
TCR MCL and Monitoring Totals	**469**	**400**	**393**	**782**	**536**	**702**

VIOLATIONS FOR THE LEAD AND COPPER RULE (LCR)

Violation	# of Violations	# of RTC Violations	# of PWSs In Violation
Monitoring, Initial Tap Sampling for Lead & Copper	11	1	11
Monitoring, Follow-up & Routine Tap Sampling for Lead & Copper	70	31	64
Treatment Installation/Demonstration (OCCT and/or SOWT)	1	0	1
Public Education	5	1	5

	Monitoring			Treatment Technique		
	# of Violations	# of RTC Violations	# of PWSs In Violation	# of Violations	# of RTC Violations	# of PWSs In Violation
LCR Monitoring and Treatment Technique Totals	**81**	**32**	**72**	**6**	**1**	**6**

Note: Although a PWS may be out of compliance with more than one contaminant or violation type, when calculating totals, it's counted no more than once within the population being totaled. So, the sum of NUMBER OF PWS'S IN VIOLATION, over the various violation types or contaminants, may not add up to the total.

CONSUMER NOTIFICATION VIOLATION (CCR)

Violation	# of Violations	# of RTC Violations	# of PWSs In Violation
CCR Complete Failure to Report	**31**	**30**	**31**

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		MCLs			Monitoring			Treatment Technique			Consumer Notification		
Rule Group	Chemical Sub-Group	# of Viols	# RTC Viols	# PWSs In Viol	# of Viols	# RTC Viols	# PWSs In Viol	# of Viols	# RTC Viols	# PWSs In Viol	# of Viols	# RTC Viols	# PWSs In Viol
CHEM	VOC	6	0	1	949	254	39	---	---	---	---	---	---
	SOC	3	0	2	80	2	9	0	0	0	---	---	---
	IOC	17	5	17	614	296	425	---	---	---	---	---	---
	RAD	42	0	42	7	3	5	---	---	---	---	---	---
CHEM Sub Total		**68**	**5**	**62**	**1650**	**555**	**452**	**0**	**0**	**0**	**---**	**---**	**---**
TCR Sub Total		469	400	393	782	536	702	---	---	---	---	---	---
SWTR Sub Total		0	0	0	0	0	0	0	0	0	---	---	---
LCR Sub Total		---	---	----	81	32	72	6	1	6	---	---	---
Consumer Notif CCR		---	---	----	---	---	----	---	---	---	31	30	31
Grand Total		**537**	**405**	**455**	**2513**	**1123**	**858**	**6**	**1**	**6**	**31**	**30**	**31**

Grand Total # Violations (MCL, Monitoring, Treatment Technique, & Consumer Notification): 3087

Grand Total # of PWSs in Violation (MCL, Monitoring, Treatment Technique, & Consumer Notification): 1237

APPENDIX A

Maximum Contaminant Levels for Drinking Water Contaminants

INORGANIC COMPOUND	MCL (mg/L)	VOLATILE ORGANIC CONTAMINANTS	MCL (mg/L)	SYNTHETIC ORGANIC CONTAMINANTS	MCL (mg/L)
Antimony	0.006	Benzene	0.005	2,4-D	0.07
Arsenic	0.05	Carbon Tetrachloride	0.005	2,4,5-TP	0.05
Asbestos	$7X10^6$ fibers/L	o-Dichlorobenzene	0.6	Alachlor	0.002
Barium	2	p-Dichlorobenzene	0.075	Atrazine	0.003
Beryllium	0.004	1,2-Dichloroethane	0.005	Benzo(a)pyrene	0.0002
Cadmium	0.005	1,1-Dichloroethlyene	0.007	Carbofuran	0.04
Chromium	0.1	1,2-Dichloroethylene,cis	0.07	Chlordane'	0.002
Cyanide	0.2	1,2-Dichloroethylene,trans	0.1	Dalapon	0.2
Fluoride	4.0	Dichloromethane	0.005	Di(2-ethylhexyl)adipate	0.4
Mercury	0.002	1,2-Dichloropropane	0.005	Di(2-ethylhexyl)phthallate	0.006
Nickel	0.1	Ethylbenzene	0.7	Dibromochloropropane	0.0002
Nitrate	10	Chlorobenzene	0.1	Dinoseb	0.007
Nitrite	1	Styrene	0.1	Dioxin	$3x1^{-8}$
Total Nitrate & Nitrite	10	Tetrachloroethylene	0.005	Diquat	0.02
Selenium	0.05	Toluene	1	Endothall	0.1
Thallium	0.002	1,2,4 Trichlorobenzene	0.07	Endrin	0.002
		1,1,1-Trichloroethane	0.2	Ethylene Dibromide	0.00005
Lead & Copper	**Action Level**	1,1,2 Trichloroethane	0.005	Glyphosate	0.7
Lead	0.015	Trichloroethylene	0.005	Heptachlor	0.0004
Copper	1.3	Vinyl Chloride	0.0002	Heptachlor epoxide	0.0002
		Xylenes (Total)	10	Hexachlorobenzene	0.001
Radionuclides	**PCi/L**			Hexachlorocyclopentadiene	0.05
Gross Alpha	15			Lindane	0.0002
Radium 226+228	5	**Total Trihalomethanes**	0.1	Methoxychlor	0.04
Uranium	30 ug/ l			Oxamy	0.2
				PCBs	0.0005
				Pentachlorophenol	0.001
				Picloram	0.001
				Simazine	0.004
				Toxaphene	0.003

APPENDIX B: Table Of Definitions

The following definitions apply to the Summary of Violations table.

Consumer Confidence Report: Water suppliers that serve the same people year-round must prepare an annual water quality report for their customers. The report includes the level (or range of levels) of any contaminants detected in the water supply, the health-based standard (maximum contaminant level) for the contaminant, and the likely source of that contaminant. The report must also list the potential health effects of any contaminant detected in violation of an EPA health standard, and a summary of the system's actions to restore safe drinking water.

Filtered Systems: Water systems that have installed filtration treatment under NR 809.76

Inorganic Contaminants: Non-carbon based compounds, such as metals, nitrates, and asbestos. These contaminants are naturally occurring in some water, but can get into water through farming, chemical manufacturing, and other human activities. EPA has established MCLs for 15 inorganic contaminants [40 CFR 141.62]

Lead and Copper Rule: This rule established national limits on lead and copper in drinking water [40 CFR 141.80-91]. Lead and copper corrosion pose various health risks when ingested at any level, and can enter drinking water from household plumbing and fixtures. States report violations of the Lead and Copper Rule in the following four categories:

> *Initial lead and copper tap M/R:* SDWIS Violation code 51 – Indicates that a system did not meet initial lead and copper testing requirements, or failed to report the results of those tests to the state.
>
> *Follow-up or routine lead and copper tap M/R:* SDWIS Violation code 52 – Indicates that a system did not meet follow-up or routine lead and copper testing requirements, or failed to report the results of those tests to the state.
>
> *Treatment Technique:* SDWIS violation codes 58 and 62 indicate a failure to install optimal corrosion control treatment (58) or source water treatment (62) which would reduce lead or copper levels in water at customer taps.
>
> *Public Education:* SDWIS code 65 shows that a system did not provide public education about reducing or avoiding lead exposure from drinking water.

Maximum Contaminant Level (MCL): The highest amount of a contaminant that EPA allows in drinking water. MCLs ensure that drinking water does not pose either a short-term or long-term health risk. MCLs are defined in milligrams per liter (parts per million) unless otherwise specified.

Monitoring: EPA specifies which water testing methods water systems must use and sets schedules for testing frequency. A system that does not follow EPA's schedule or methodology is in violation of 40 CFR 141.

States must report monitoring violations that are significant as determined by the EPA Administrator and in consultation with the states. For this report, significant monitoring violations are major violations, and occur when no samples are taken, or results are not reported during a compliance period. A major monitoring violation of the Surface Water Treatment Rule occurs when at least 90% of the required samples are not taken, or results are not reported during the compliance period.

Municipal Community (MC) A MC public water system serves at least 15 service connections used by year-round residents or regularly serves at least 25 year-round residents. These systems include cities, villages, and sanitary districts.

Nontransient Noncommunity (NN) - A NN public water system is one that is not a community water system and regularly serves at least 25 of the same people over six months of the year. These include schools, day care centers, and factories.

Organic Contaminants: Carbon-based compounds, such as industrial solvents and pesticides. These contaminants generally get into water through runoff from cropland or discharge factories. EPA has set monitoring and maximum allowable levels on 54 organic contaminants.

Other Than Municipal Community (OC)
An OC public water system is one that is not a municipal system and serves at least 15 service connections used by year-round residents or regularly serves at least 25 year-round residents. These include mobile home parks, apartment buildings, and condominium complexes.

Radionuclides: Radioactive particles that can occur naturally in water or result from human activity. EPA has set legal limits on five types of radionuclides: Radium-226, radium-228, gross alpha, beta particle/photon emitters, and uranium. Violations for these contaminants are reported using the following categories:

> *Gross Alpha:* Gross alpha includes radium-226, but is adjusted by subtracting the amount contributed by radon and uranium. The adjusted gross alpha cannot exceed 15 pCi/l.
>
> *Combined Radium:* Radioactivity from Ra-226 plus Ra-228 cannot exceed 5 pCi/l.
>
> *Gross Beta:* Radioactivity from beta particle/photon emitters cannot exceed 4 millirem/year.
>
> *Uranium:* Radioactivity from Uranium cannot exceed 30 micrograms per liter (ug/l)

Return to Compliance (RTC): A system returns to compliance when it completes monitoring or operational requirements that caused a maximum contaminant level, monitoring/reporting, or treatment technique violation.

Surface Water Treatment Rule: The Surface Water Treatment Rule establishes criteria under which water systems supplied by surface water sources, or groundwater sources under the direct influence of surface water, must filter and disinfect their water. Violations of the "Surface Water Treatment Rule" are reported using the following four categories:

> *Monitoring, routine/repeat (for filtered systems):* Indicates a system's failure to carry out required tests or to report the test results.
>
> *Treatment techniques (for filtered systems):* Indicates a system's failure to properly treat its water.
>
> *Monitoring, routine/repeat (for unfiltered systems):* Indicates a system's failure to carry out required tests or to report the test results.
>
> *Failure to Filter (for unfiltered systems):* Indicates a system's failure to properly treat its water.

Total Coliform Rule: The Total Coliform Rule establishes regulations for microbiological contaminants in drinking water. These contaminants can cause acute health problems. Violations for the "Total Coliform Rule" are reported using the following categories:

> *Acute MCL violation:* Occurs when samples are positive for fecal coliform or E. coli. Requires the system to immediately notify consumers, and take corrective action.
>
> *Non-Acute MCL:* Occurs when multiple samples are positive for total coliform, which is an indicator organism. For systems collecting fewer than 40 samples/month, more than one total coliform positive is a violation. For systems collecting more than 40 samples/month, a violation occurs if more than 5% of the samples are total coliform positive in one month.
>
> *Major routine and follow-up monitoring:* Occurs when a system does not perform any monitoring.

Transient Noncommunity(TN): A TN public water system is one that is not a community water system and serves at least 25 people at least sixty days of the year. These include motels, restaurants, parks, taverns, churches, and campgrounds.

Treatment Techniques: A treatment or process approved by EPA instead of an MCL for contaminants that laboratories cannot adequately measure.

Violation: Failure to meet any state or federal drinking water requirement.